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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/656,969

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Dr. Yiming Zhou

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08/30/2005

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EXAMINER

ZHONG, CHAD

ART UNIT

PAPER NUMBER

2152

DATE MAILED: 08/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/656,969

Applicant(s)

ZHOU, DR. YIMING

Examiner

Chad Zhong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

OFFICE ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06/20/2005 has been entered.

This action is responsive to communications: Amendment, filed on 06/20/2005.

2. Claims 1-19 are presented for examination. In amendment, filed on 6/20/2005:

Claims 1, 7 are amended.

Claims 2-6, and 8-10 are previously presented.

Claims 11-19 are original.

3. Claim 8 is objected to because, as per claim 8, line 4, grammar error in terms of "a network administrators", for the purpose of examination, the examiner will read this limitation as "a network administrator".

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 17 and 19 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Specifically, in Applicant's specification, the carrier medium is deemed satellite or wireless communications system. Such transmission mediums are non-statutory.

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Claim Rejections - 35 USC § 112, second paragraph

5. Claims 1, 4, 6-8, and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. The following terms are not clearly understood:

i. As per claim 1, line 9, claim 14, line 4 it is unclear whether ‘transmit service requests’ means resource request, i.e. ‘request for a piece of software, importing or exporting software module’ or ‘execution of tasks on behalf of a requesting originator’, both of the above limitations are supported by Applicant’s specification, specifically, the former is located on pg 5, lines 1-2, and the latter on pg 5, lines 3-10, pg 7, lines 11-12. For the purpose of examination, the examiner will consider ‘execution of tasks on behalf of a requesting originator’.

ii. As per claim 1, line 11, claim 14, line 6 it is unclear whether ‘perform a task for said station’ means ‘performing the task of importing or exporting software module’ or ‘execution of tasks on behalf of a requesting originator’, both of the above limitations are supported by Applicant’s specification, specifically, the former is located on pg 5, lines 1-2, and the latter on pg 5, lines 3-10, pg 7, lines 11-12. For the purpose of examination, the examiner will consider ‘execution of tasks on behalf of a requesting originator’.

iii. As per claim 1, line 13, it is not clearly understood whether “receive service requests” refers to “transmit service requests” in claim 1, line 9 (i.e. if they are the same, the word such as “said” or “the” must be used);

v. As per claim 1, lines 13 – 14, it is unclear what is meant by ‘from said network’ and ‘to said network’, i.e. are there specific devices associated with the network that the answer unit is receiving and transmitting respectively, furthermore, are these requests done through broadcasting or unicasting from another station.

vi. As per claim 6, 7, it is unclear how importing and exporting software modules fit in with executing tasks on behalf of another network station. As stated above in item ii, the examiner will consider ‘execution of tasks on behalf of a requesting originator’ only.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4, 6-7, and 9-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hild et al. (hereinafter Hild), US 6,532,368, in view of Segarra et al. (hereinafter Segarra), US 4,466,063.

7. As per claim 1, Hild teaches a station for a network apparatus, said network apparatus comprising said station and a plurality of other stations (Fig 1, wherein Fig 1 is an example of a particular network station; Col. 4, lines 59-61), all interconnected in a network by a communication link (Col. 4, lines 49-52), said station comprising:

- a network connection (Fig 2A, item 34, 35);

- a self assessment module operable to determine a current status of said station, wherein said current status is a measure of available resources of said station (Col. 10, lines 33-45, lines 57-63, Col. 11, lines 15-22, Col. 8, lines 47-48, Col. 12, lines 14-20, local service list is kept and checked as in Fig 2D);

- a trust list that includes a station identifier for each other station of said plurality of other stations which is designated as trusted to perform tasks for said station (Col. 8, lines 33-39; Fig. 2D, remote service list);

However, Hild does not explicitly teach:

- a broadcast unit operable to transmit service requests to said network connection and onto said network, said service requests being directed to said each other station identified in said trust list and constituting a request to said each other station to perform a task for said station; and

- an answer unit operable to receive service requests from said network through said network connection and, in response thereto, to transmit to said network through said network connection an acceptance or refusal message in respect of said service request, said acceptance or refusal being decided

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having regard to said current status of said station, as determined by said self assessment module.

In a similar system, Segarra teaches a originator broadcasting of service requests to plurality of network nodes (Col. 24, lines 24-30), the requests being a service request to be performed on behalf of the originating node by other nodes on the network (Col. 28, lines 18-35), thereafter, nodes receiving the requests performs self assessment on their current respective resources, and returning a broadcast reply message back to the originator, indicating the current availability of the resources (Col. 28, lines 24-52).

It would have been obvious to the person of ordinary skill in the art at the time of the invention to combine teachings of Hild and Segarra because requesting a remote device to perform a task on behalf of the originating node and having the ability to determine whether the resource is available on said remote device as taught by Segarra would enhance the capability of Hild by allowing for remote stations to perform tasks on behalf of the originator on a resource limited basis.

8. As per claim 2, Hild teaches said self assessment module is operable to determine a static status for said station based on hardware resources of said station and a dynamic status for said station based on current usage of said hardware resources (Col. 10, lines 35-45, lines 58-63; Col. 11, lines 13-21, the broadcasting is directly proportional to the amount of resources available on the current station; Fig 2B, wherein service 'B1' is static and expiry time 'm' is dynamic).

9. As per claim 3, Hild teaches a system security module operable to handle encryption between said station and each other trusted station (Col. 7, line 67 – Col. 8, line 2).

10. As per claim 4, Hild does not explicitly teach a task execution, monitoring and reporting module operable to broadcast to said network progress updates on tasks accepted by and being performed in said station on behalf of an other station.

In a similar system, Segarra teaches tasks a execution, monitoring, and reporting module (Col. 28, lines 10-45; Col. 29, lines 5-10; Col. 28, lines 8-31) operable to broadcast to a network progress updates on

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tasks accepted by and being performed in station on behalf of an other station (Col. 28, lines 44-46).

It would have been obvious to the person of ordinary skill in the art at the time of the invention to combine teachings of Hild and Segarra because execution, monitoring and reporting done through broadcast by as taught by Segarra would enhance the capability of Hild by allowing for remote stations to perform tasks on behalf of the originator on a resource limited basis.

11. As per claim 5, Hild does not explicitly teach a task scheduler module arranged to monitor all tasks being performed in said station, including tasks initiated by said station for said station and tasks being performed in response to receipt of a service request from one of said other stations.

In a similar system, Sagarra teaches monitoring of all tasks performed in a station (Col. 28, lines 42-51; Col. 29, lines 5-15; Col. 30, lines 53-65). It would have been obvious to the person of ordinary skill in the art at the time of the invention to combine teachings of Hild and Sagarra because monitoring of all tasks within a station comprising tasks initiated by said station as well as tasks as dedicated to serve on behalf of another station as taught by Sagarra would enhance the system of Hild by allowing for constant monitoring of the status of each tasks associated with the current station.

12. As per claim 6, Hild does not explicitly teach a service requirement analysis module and a software resource repository in which a plurality of software modules are stored said service requirement analysis module being operable to maintain said software resource repository by importing and exporting software modules to and from other stations having regard to demand in said station for such software modules.

In a similar system, Segarra teaches software resource repository comprising a plurality of software modules (Col. 28, lines 35-42, wherein the modules are software/system resources) and a service requirement analysis module to maintain said software resource repository by importing external

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resources and exporting internal resources (Col. 28, lines 23-45). It would have been obvious to the person of ordinary skill in the art at the time of the invention to combine teachings of Hild and Segarra because importing and exporting of resources, and maintenance of software repository using service requirement analysis as taught by Segarra would enhance the capability of Hild by allowing for remote stations to perform tasks on behalf of the originator on a resource limited basis.

13. As per claim 7, Hild teaches wherein said station is further operable to broadcast messages to said network offering software modules held in said software resource repository to said or each other trusted station (Col. 8, lines 35-45).

14. As per claim 8, Hild does not explicitly teach a service/performance history learning analysis module operable to apply artificial intelligence to find task bottlenecks in said station and said other stations, and to bring these to the attention of a network administrator if it can not solve them itself. In a similar system, Sagarra teaches utilizing artificial intelligence to find the most efficient node to carry out the task on behalf of the current station (Col. 29, lines 1-15). It would have been obvious to the person of ordinary skill in the art at the time of the invention to combine teachings of Hild and Sagarra because using artificial intelligence to find tasks bottlenecks and attempting to avoid such bottlenecks as taught by Sagarra would enhance the capabilities of Hild by allowing for prevention of congestion of tasks within a particular node. Neither references teach bring to the attention of a network administrator if it can not solve them itself. However, it would have been obvious to the person of ordinary skill in the art to have notified an appropriate personnel upon a detection of an error that's not capable of self resolution in order to allow for manual solution to the bottleneck problem.

15. As per claim 9, Hild does not explicitly teach a task failure management module, operable to transmit to said network a failure message in response to failure of said station successfully to complete a task being performed for one of said other stations.

In similar system, Segarra teaches transmission of a failure message in response to failure to successfully complete a task being performed for one of said other stations (Col. 2, lines 39-45; Col. 4, lines 43-47; Col. 30, lines 53-64). It would have been obvious to the person of ordinary skill in the art at the time of the invention to combine teachings of Hild and Segarra because failure detecting messages reporting status of nodes within network as taught by Segarra would enhance the capability of Hild by allowing for up-to-date monitoring of the remote node's status.

16. As per claim 10, Hild does not explicitly teach wherein said task failure management module is further operable to monitor for failure messages transmitted by one of its trusted stations and, in response thereto, to handle said failure message as a service request message for said failed task.

In a similar system, Segarra teaches in response to a failure on the network system, treat the failure as a service request message for the failed task (Col. 31, line 1 – Col. 32, line 2). It would have been obvious to the person of ordinary skill in the art at the time of the invention to combine teachings of Hild and Segarra because failure detecting messages reporting status of nodes within network and initiation of another service request message as taught by Segarra would enhance the capability of Hild by allowing for up-to-date monitoring of the remote node's status and failure recovery in event of a failure.

17. As per claim 11, Hild teaches a network interconnected by a communication link (Fig 2A, item 34, 35).

18. As per claim 12, Hild teaches wherein there is no central server for said network (Col. 4, lines 45-60).

19. As per claim 13, Hild teaches wherein said network operates to a protocol that permits stations to be removed from and added to said network dynamically (Col. 5, lines 40-43).

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20. As per claim 14, Hild teaches a method of distributing tasks in a network comprising a plurality of stations, all interconnected by respective network connections to a communication link, said method comprising:

transmitting a service request by a first station to its network connection and onto said network, said service request being directed to a trusted sub-group of said stations and specifying a task to be performed (Col. 8, lines 33-39; Fig. 2B, item 31, 32);

However, Hild does not explicitly teach:

receiving said service request by a second station, that is one of said trusted sub-group of stations, through its network connection and, in response thereto, transmitting to said network through its network connection an acceptance or refusal message in respect of said service request, said acceptance or refusal being decided having regard to said current status of said second station, as determined by a self assessment of said second station; and

carrying out said task specified in said service request by said second station and returning a service result to said first station.

In a similar system, Segarra teaches

receiving said service request by a second station, that is one of said trusted sub-group of stations (Col. 28, lines 24-52), through its network connection and, in response thereto, transmitting to said network through its network connection an acceptance or refusal message in respect of said service request (Col. 28, lines 24-52), said acceptance or refusal being decided having regard to said current status of said second station, as determined by a self assessment of said second station (Col. 28, lines 24-52); and

carrying out said task specified in said service request by said second station and returning a service result to said first station (Col. 29, lines 1-15). It would have been obvious to the person of ordinary skill in the art at the time of the invention to combine teachings of Hild and Segarra because requesting a

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remote device to perform a task on behalf of the originating node and have the ability to determine whether the resource is available on said remote device as taught by Segarra would enhance the capability of Hild by allowing for remote stations to perform tasks on behalf of the originator on a resource limited basis.

21. As per claim 15, Hild teaches wherein said carrying out of said service request by said second station involves further distribution of said service by transmitting further service requests to a sub-group of said stations trusted by said second station (Col. 15, lines 10-15, the initial communication between watch and a computer, the watch and computer both being members of subgroup of trusted stations, afterwards, the user travels to the car, the tasks and information from the watch is now being send towards different car peripherals, which are also members of the subgroup of trusted stations).

22. As per claim 16, Hild teaches computer software comprising program code means for carrying out a method according to claim 14 (Col. 10, lines 33-45).

23. As per claim 17, Hild teaches a carrier medium carrying computer software according to claim 16 (Col. 10, lines 33-45).

24. As per claim 18, Hild teaches the medium being a storage medium (Col. 10, lines 33-45).

25. As per claim 19, Hild teaches the medium being a transmission medium (Fig. 2A, item 34, 35).

Conclusion

26. Applicant's remarks filed 6/20/2005 have been considered but are found moot in view of the new grounds of rejection necessitated by Applicant's amendment.

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27. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents and publications are cited to further show the state of the art with respect to "Distributed Service Provider".

- | | | |
|------|--------------|------------------|
| i. | US 5,034,882 | Eisenhard et al. |
| ii. | US 4,969,146 | Twitty et al. |
| iii. | US 5,603,054 | Theimer et al. |
| iv. | US 5,555,376 | Theimer et al. |
| v. | US 6,085,216 | Huberman et al. |
| vi. | US 5,978,940 | Newman et al. |

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chad Zhong whose telephone number is (571)272-3946. The examiner can normally be reached on M-F 7:15 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BURGESS, GLENTON B can be reached on (571)272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CZ
August 15, 2005

